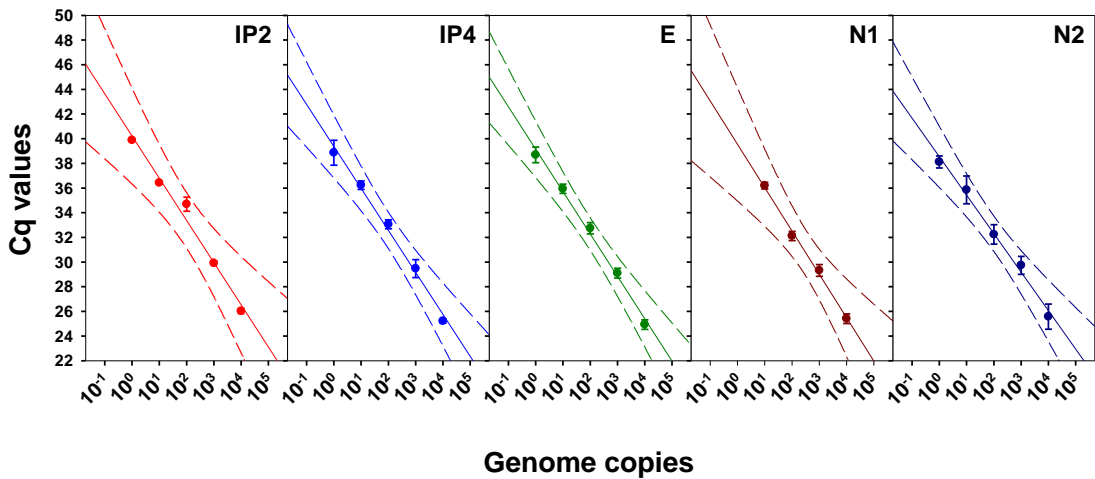


**FIG S1** Average standard curves for each of the targets used in this study (IP2, IP4, E, N1 and N2). A. Regression line (solid lines) and their 99% confident (dashed lines). B. Parameters defining each of the curves.

**A**

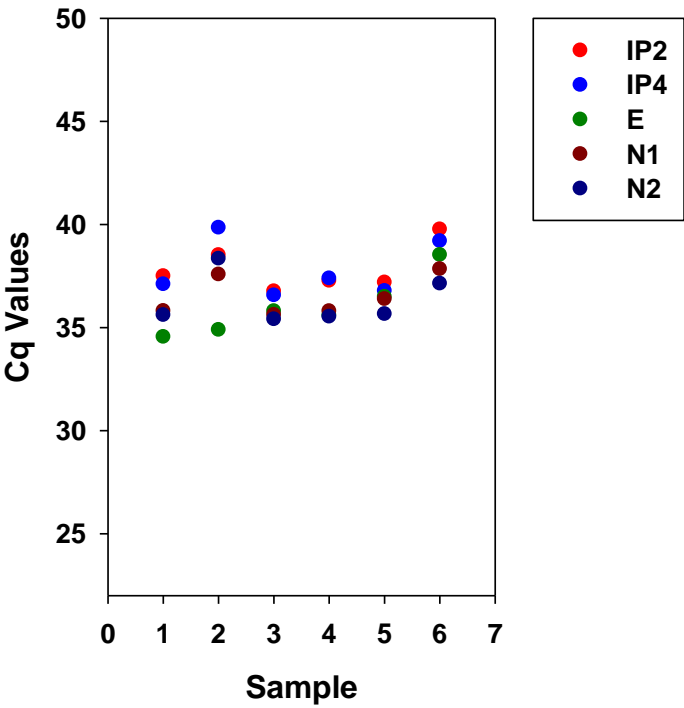


**B**

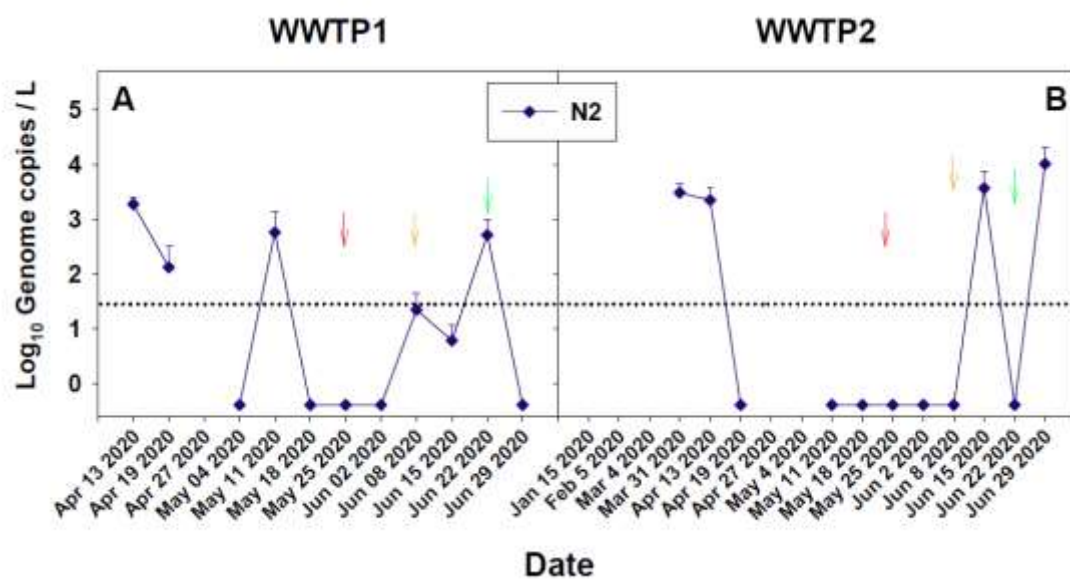
TARGET*	SLOPE	INTERCEPT	EFFICIENCY	R <sup>2</sup>	Percent Replicates Positivity	
					10 <sup>1</sup> Genome copies	10 <sup>0</sup> Genome copies
IP2	-3.421	40.228	96.0	0.981	33	33
IP4	-3.404	39.376	96.7	0.992	67	28
E	-3.436	39.152	95.5	0.994	100	50
N1	-3.513	39.543	92.6	0.995	100	0
N2	-3.120	38.540	109.2	0.991	100	67

\*Following the available protocols, the number of PCR cycles performed was of 50 for IP2 and IP4 and 45 for E, N1 and N2.

**FIG S2** Levels of SARS-CoV-2 genomes (Cq Values) in six sewage samples positive with the five targets (IP2, IP4, E, N1 and N2).



**FIG S3** Evolution of SARS-CoV-2 genomes in two large Barcelona wastewater treatment plants (WWTP), employing the nucleoprotein gene (N2 primers). Absence of values at a given date is due to the unavailability of aliquots to assay. Dashed line depicts the limit of detection. Red, orange and green arrows indicate Phase 1, Phase 2 and Phase 3 of the deconfinement, respectively.



**TABLE S1** Main activities permitted in the gradual deconfinement.

Phase 0	Complete and general lockdown.
Phase 1	Individual outdoor sporting activities allowed. Outdoors restaurants and bars at 50% capacity. Maximum 10 persons/group. Two meters of social distance kept at all instances and compulsory use of mask. Car occupancy restricted to members of the same family. Ban on traveling outside the metropolitan area. Hotel open except communal areas. Religious activities permitted at 50% occupancy.
Phase 2	Outdoor sporting activities allowed. Outdoors restaurants and bars at 60% capacity. Indoor restaurants and bar at 40% capacity. Maximum 10 persons/group. Two meters of social distance kept at all instances and compulsory use of mask. Car occupancy restricted to members of the same family. Ban on traveling outside the metropolitan area. Swimming pools and bathing areas open to public. Hunting activities permitted. Religious activities permitted at 50% occupancy. Indoor cultural events permitted at 30% occupancy but not exceeding 50 persons. Department stores and malls open at 30% occupancy in communal areas and 50% inside shops.
Phase 3	Outdoor sporting activities allowed. Restaurants and bars at 50% capacity. Maximum 10 persons/group. One and a half meters of social distance kept at all instances and compulsory use of mask. Car occupancy open to members of different families. Travel outside the metropolitan area allowed. Swimming pools and bathing areas open to public. Religious activities permitted. Hunting activities permitted. Religious activities permitted. Indoor cultural events permitted at 50% occupancy but not exceeding 2000 persons. Department stores and malls open.

**TABLE S2** Daily wastewater flow in the studied wastewater treatment plants,

<b>Date</b>	<b>Wastewater Flow (L per day)</b>	
	<b>WWTP1</b>	<b>WWTP2</b>
March 31 2020	NA*	256,048,000
April 13 2020	652,590,000 <sup>†</sup>	362,922,000 <sup>†</sup>
April 19 2020	940,824,000 <sup>†</sup>	329,880,000 <sup>†</sup>
April 27 2020	325,821,000	247,088,000
May 04 2020	323,253,000	239,968,000
May 11 2020	341,964,000	230,912,000
May 18 2020	326,931,000	233,648,000
May 25 2020	324,172,000	252,523,000
June 02 2020	382,081,000	247,415,000
June 08 2020	342,162,000	247,486,000
June 15 2020	326,424,000	234,225,000
June 22 2020	324,759,000	226,124,000
June 29 2020	323,592,000	229,884,000

\* NA: Not available; sampling at this WWTP started April 13, 2020.

<sup>†</sup> Heavy Mediterranean rainfall events reported.